

**Mailed 11/2/2000****BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Order Instituting Investigation into implementation of Assembly Bill 970 regarding the identification of electric transmission and distribution constraints, actions to resolve those constraints, and related matters affecting the reliability of electric supply.

FILED  
PUBLIC UTILITIES COMMISSION  
NOVEMBER 2, 2000  
SAN FRANCISCO OFFICE  
INVESTIGATION 00-11-001

**O P I N I O N**

This order opens an investigation of the state's transmission and electric generation system reliability pursuant to Assembly Bill (AB) 970; signed September 6, 2000. The Governor signed AB 970 in recognition that the state's electric system may not be adequate in coming years to accommodate the state's growing demand for electricity. AB 970 directs the Commission to overcome problems in the state's transmission and distribution system. Because of the interrelationship between transmission and generation on the utilities' systems, this investigation also examines the prospects for utility acquisition of new peaking generation resources for Summer 2001 and beyond.

**Background**

This year so far, California's electric system has shown increasing signs of strain and, according to most observers, vulnerability to market power by unregulated electricity suppliers. Despite moderate temperatures, supplies in the new market for power could barely meet California's demand for electricity.

Consequently, California's Independent System Operator (ISO) reached Stage II conditions several times this summer (at which point it began the curtailment of interruptible load), and several times came close to reaching Stage III conditions at which time it would begin ordering rotating outages of firm customers statewide. Large industrial customers who purchase interruptible service were interrupted 17 times, far more than the average in past years.<sup>1</sup> In the Bay Area, the ISO called for rotating outages in the San Francisco Bay Area on June 14, when it ordered PG&E to cut power to more than 100,000 residential, industrial and commercial customers due to dangerously low voltage that threatened the stability of the system.

The transmission system also showed signs of strain during the summer. On several days, various transformer banks and/or transmission paths were operated above normal limits. The ISO came close to interrupting firm customers in order to avoid overloading transmission equipment.

This summer's outages and close calls are costly and may compromise public safety. The state's economic health depends upon a reliable and cost-effective electric system.

The system's capacity problems may result from a variety of factors, including reduced imports from neighboring regions, a failure of the state's new industry structure to provide the impetus for adequate supply, and diminished performance from aging power plants, among other things. In response to these problems, the state has initiated actions in several areas. For example, the Commission is conducting an extensive investigation of possible market failures

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<sup>1</sup> Although not every customer was called upon to curtail for each event.

in Investigation (I.) 00-08-002, and has taken steps to implement new energy efficiency programs. The California Energy Commission (CEC) is reviewing its siting practices and the availability of renewable resources. In addition, several large power plants are in the planning and permitting stages. These actions, while expected to yield some results, require a complementary effort to consider whether and how transmission upgrades and acquisition of additional peaking capacity that can mitigate anticipated future reliability problems. AB 970 recognizes that complementary work, which we formally initiate by this order.

### **The Requirements of AB 970**

Among other things, Section 7 of AB 970 provides that the Commission shall:

Identify and undertake those actions necessary to reduce or remove constraints on the state's existing electrical transmission and distribution system, including, but not limited to, reconductoring of transmission lines, the addition of capacitors to increase voltage, the reinforcement of existing transmission capacity, and the installation of new transformer banks. The commission shall, in consultation with the Independent System Operator, give first priority to those geographical regions where congestion reduces or impedes electrical transmission and supply. (Public Utilities Code Section 399.15(a)(1).)

Section 4 of AB 1970 allows air districts to issue a “temporary, expedited, consolidated permit” for certain power plants, provided (among other things) that, under subsection (4):

The power plant will be interconnected to the grid in a manner that the Public Utilities Commission, in consultation with the Electricity Oversight Board, has determined will allow the powerplant to provide service to a geographical area of the state that is urgently in need of generation in order to provide reliable electric service...

As AB 970 recognizes, transmission systems are crucial to moving electricity effectively and efficiently. Transmission capacity determines whether customers will receive power and what power supplies serve particular customers. Many Californians live in areas where electricity demand exceeds transmission import capacity. In those areas, the difference between demand and import capacity must be made up by local generation. In these areas, where local supplies cannot accommodate demand, the choice between new power plant construction and new transmission capacity will depend on relative economics, siting and environmental constraints, and the ability of transmission to make available other sources of supply.

Transmission can reduce electricity costs by allowing the import of cheaper generation. The configuration of the transmission system can also affect the extent to which electricity sellers can exert market power in constrained areas. That is, if local generation is inadequate to serve local demand, those in control of local generation may be able to raise prices to consumers. Expansion of the transmission system allows a larger number of generators to support demands, reducing market power.

Currently, California appears to be subject to a mismatch between supply and demand statewide and in specific geographic areas. In recent months, various organizations, including the CEC, the ISO and the Electricity Oversight Board, have worked to identify where the electric system may require improvements. (Appendix B lists projects that the utilities and the ISO have so far identified to the Commission.) This investigation will examine the most cost-effective ways of easing transmission constraints and associated generation shortfalls, both in the short term and the longer term. For some areas of the state, we will review the economic and siting tradeoffs between transmission upgrades

and local generation. In this endeavor, the Commission staff will consult with the ISO on behalf of the Commission, as AB 970 requires.

### **The Relationship between Transmission Upgrades and Peaking Generation Projects**

On October 30, 2000, the ISO Board voted to authorize its management to enter into contracts to purchase for roughly 2,000 megawatts (MW) of new peaking generation projects to improve system reliability in 2001. The ISO's Request for Bids, issued August 25, offered proponents of new peaking projects a three-year pay back on capital investment, with a rate of return equal to 16.6%, plus market prices for power. Plants would have to be constructed by June 1, 2001 in order to qualify for capital payments. The solicitation does not fully specify the terms under which power would be committed to the ISO's use during periods of peak demand.

According to the ISO, the contracts will not be public until after they are signed. They will not be scrutinized in a public forum, and their costs and benefits will not have been examined in light of alternatives, such as transmission upgrades. The ISO and most recent studies of California electricity markets have found that current market prices are not those that would occur in competitive markets. Therefore, contract terms that offer project proponents market prices plus full capacity costs appear exorbitant, especially if, as we understand, the ISO's contracts do not commit the power to be available to serve the state's interests. The question also arises as to whether the ISO--which is empowered only to operate the state's transmission system and which does not represent the state or its consumers -- is the appropriate organization to plan, solicit and pay for the construction of new power plants across the state, absent some substantial involvement of agencies that represent the state's interests. An

alternative approach that we believe must be considered is for the Commission to identify whether there is a need for new power plants and whether it should order regulated utilities to construct them or contract for them at prices that approximate costs. We therefore initiate this investigation to examine such possible outcomes. In pursuing this and related options, we will consult with the state's Electricity Oversight Board because of its knowledge of the ISO's proposals and procedures and the office of the Attorney General as may be necessary.

### **Preliminary Scoping Memo**

The scope of this proceeding shall include all issues raised in this order, but will not necessarily be limited to these issues. The Commission will give its most immediate attention to actions that will ease supply problems in the Summer of 2001. Then, the Commission will examine the situation in coming years.

Pursuant to Rule 4(a) the rules and procedures found in Article 2.5 of the Commission's Rules of Practice and Procedure (Rules) shall apply to this proceeding. This investigation is classified as a ratesetting proceeding and the Commission expects to hold a hearing.

The assigned Commissioner and ALJ will convene a prehearing conference to develop a service list for this proceeding and to further delineate issues related to scope and schedule for this proceeding. Notice of the prehearing conference will be provided by a ruling.

Any person who objects to the categorization of this investigation must file an appeal no later than 10 days after the date of this OIL, pursuant to Rule 6.4(a). The temporary service list is attached to this order and shall be used for service until a service list for this proceeding is established at the prehearing conference.

Persons who want to become a “party” to this proceeding shall appear at the prehearing conference, or at the formal hearing, and fill out the “Notice of Party/Non-Party Status” form (appearance form).

Those persons who do not want to be parties, and only want notice of the hearings, rulings, proposed decisions, and decisions may either appear at the prehearing conference or the formal hearing and fill out an appearance form, or they may mail a written request to the Process Office requesting that they be added to the service list for information only.

Those persons employed by the State of California who are interested in this proceeding may be added to the “state service” section of the service list either by appearing at the prehearing conference or at the formal hearing and filling out an appearance form, or they may mail a written request to the Process Office requesting that they be added to the state service list. All of the names appearing on the state service list shall be served with all documents that parties may submit or file in connection with this proceeding.

The Process Office shall develop an initial service list based on the appearances at the first prehearing conference. This initial service list shall be posted on the Commission’s web site, [www.cpuc.ca.gov](http://www.cpuc.ca.gov), as soon as it is practicable.

Any party interested in participating in this investigation who is unfamiliar with the Commission’s procedures should contact the Commission’s Public Advisor Office in Los Angeles at (213) 649-4782, or in San Francisco at (415) 703-2074.

### **Ex Parte Communications**

This proceeding is subject to Rule 7(c) of the Commission’s Rules of Practice and Procedure. In addition to placing specific requirements on ex parte

communications, Rule 7(c) also requires parties to report ex parte communications pursuant to Rule 7.1.

### **Findings of Fact**

1. AB 970 directs this Commission to investigate the state's transmission system and determine whether the utilities should make system improvements.
2. Transmission facilities and generation facilities are highly interrelated in the state's grid. The construction or improvement of transmission or generation facilities may affect the efficient operation and use of other transmission and generation facilities.
3. The ISO has solicited bids for roughly 2,000 MW of new peaking generation projects and has received proposals which are appropriately the subject of this inquiry.

### **Conclusions of Law**

1. The Commission should initiate an investigation of the state's transmission system and whether the utilities should be ordered to upgrade those facilities, consistent with AB 970 and this order.
2. The Commission should examine the utilities' role in constructing or contracting for new peaking generation consistent with this order.

## **O R D E R**

### **IT IS ORDERED** that:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E), and the California Independent System Operator (ISO) are made respondents to this investigation.



2. PG&E, SCE and SDG&E shall, no later than November 22, 2000, file an analysis of the costs and benefits of each project attached herein as Appendix B, and any other projects the utility believes may reduce or remove constraints on the state's existing transmission and distribution system, consistent with Assembly Bill 970. The November 22, 2000 filings must address those projects that could be constructed prior to August 1, 2001 but need not address those projects that could not be constructed prior to August 1, 2001.

3. PG&E, SCE and SDG&E shall, no later than November 22, 2000, file analyses addressing (a) their ability to build or contract for peaking capacity for next summer, (b) their ability to interconnect that capacity for use next summer, and (c) the costs and benefits of that capacity and any alternatives.

4. The ISO and parties may, no later than December 20, 2000, file analyses and comments on the November 22, 2000, utility filings.

5. The assigned Commissioner and/or administrative law judge shall set forth a schedule and procedures for considering longer term transmission and generation plant projects, as set forth herein.

6. The Executive Director shall cause this Order Instituting Investigation (OII) to be served on the respondents and on the service list in Rulemaking 94-04-031 / Investigation 94-04-032.

7. The temporary service list is attached and shall be used for service of all pleadings until a service list for this proceeding is established. The official service list for this proceeding shall be created by the Process Office and posted on the Commission's web site ([www.cpuc.ca.gov](http://www.cpuc.ca.gov)) as soon as practicable after the first PHC. Parties may also obtain the service list by contacting the Commission's Process Office at (415) 703-2021.

This order is effective today.

Dated November 2, 2000, at San Francisco, California.

LORETTA M. LYNCH  
President  
HENRY M. DUQUE  
JOSIAH L. NEEPER  
RICHARD A. BILAS  
CARL W. WOOD  
Commissioners

I will file a partial dissent.  
/s/ HENRY M. DUQUE  
Commissioner

**See Acrobat Version for Appendix A**

**APPENDIX A**  
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**APPENDIX A**

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**(END OF APPENDIX A)**

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APPENDIX B

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LIST OF TRANSMISSION PROJECTS BY UTILITY  
(Those in service for 2001)

**PG&E Projects**

- 1 Tesla-Newark 230kV Line
- 2 Lockeford-Lodi 60kV Lines
- 3 Ravenswood 230kV Loop
- 4 Lakewood Area 115kV Transmission Reinforcement
- 5 Eight-Mile Road 230kV Loop
- 6 Pittsburg-Tassajara 230kV Line Reconductoring (Project #T552)
- 7 Janes Creek & Humboldt Modification
- 8 Tesla 500/230kV Transformer (Project #T558)
- 9 Metcalf 500kV Shunt Capacitor
- 10 Martin Capacitor (Project #T636)
- 11 Mountain View-Whisman Line
- 12 Transformer Rating Increase / Moss Landing, Jefferson
- 13 Nortech (Kifer-Trimble) 115kV Loop (Project #T010)
- 14 San Luis Obispo 70 kV Reinforcement Project (Project #T140)
- 15 North Receiving Station - Santa Clara (Project #T181)
- 16 Paradise Area Reinforcement Project (Project #T228)
- 17 Pinedale Substation Interconnection (Project #T351)
- 18 Monte Rio-Fulton 60kV Line Reinforcement Project (Project #T377)
- 19 Rerate Moss Landing-Salinas-Soledad # 1 and 2 115kV Line (Project #T458)
- 20 Rerate Coburn-Oil Fields # 1 and 2 60kV Lines (Project #T460)
- 21 Maxwell-Cortina 60 kV Line Overload (Project #T468)
- 22 Willow Slough Junction-Knights Landing Junction line Rerate (Project #T472)
- 23 Ravenswood 230/115kV Transformer Rerate (Project #T476)
- 24 Belmont-Bair 115 kV Rerate (Project #T478)
- 25 Fulton #1 60 kV Line Reinforcement Project (Project # T490)
- 26 Fitch Mountain #1 60 kV Tap (Project #T492)

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- 27 Ravenswood-Ames 115kV Rerate (Project # T498)
- 28 Lakewood Area Transmission Reinforcement (Project #T546)
- 29 Cooley Landing 115kV Reinforcement (Project #T564)
- 30 Fulton-Fitch Mountain Jct 60 kV Circuit (Project # T575)
- 31 Coyote Valley Substation Interconnection (Project #T579)
- 32 Lockeford Area 60 kV Circuit Rerates (Project #T602)

**SCE Projects**

- 33 2001RMR Elimination Project Capacitors
- 34 Path 26 (Midway-Vincient) Wavetrap Upgrades
- 35 Tehachapi 66kV Upgrades

**SDG&E Projects**

- 36 Reconductor Rancho Santa Fe Tap-Bernardo Tap 69kV (TL610C & TL616A)
- 37 New Escondido 230/69kV bank

**(END OF APPENDIX B)**